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=> d his

     (FILE 'HOME' ENTERED AT 10:18:44 ON 04 FEB 2003)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 10:19:41 ON 04 FEB 2003
L1        372494 S PROTEASE?
L2           735 S NOCARDIOPSIS
L3            59 S L1 AND L2
L4         10012 S FEED (A) ADDITIVE?
L5             1 S L3 AND L4
L6          6127 S ACID (A) STABLE
L7           406 S L1 AND L6
L8          7253 S VEGETABLE (A) PROTEIN?
L9         48795 S ANIMAL (A) FEED?
L10        55897 S L8 OR L9
L11            4 S L7 AND L10
L12            4 DUP REM L11 (0 DUPLICATES REMOVED)
                 E SJOEHOLM C/AU
L13           23 S E3-E4
L14            5 S OESTERGAARD P R/AU
                 E OESTERGAARD P R/AU
L15           34 S E3-E7
L16           51 S L13 OR L15
L17            6 S L1 AND L16
L18            6 DUP REM L17 (0 DUPLICATES REMOVED)
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* * * * * * * * * * Welcome to STN International * * * * * * * * * *

| | | |
|---|---|---|
| NEWS 1 | | Web Page URLs for STN Seminar Schedule - N. America |
| NEWS 2 | Apr 08 | "Ask CAS" for self-help around the clock |
| NEWS 3 | Apr 09 | BEILSTEIN: Reload and Implementation of a New Subject Area |
| NEWS 4 | Apr 09 | ZDB will be removed from STN |
| NEWS 5 | Apr 19 | US Patent Applications available in IFICDB, IFIPAT, and IFIUDB |
| NEWS 6 | Apr 22 | Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS |
| NEWS 7 | Apr 22 | BIOSIS Gene Names now available in TOXCENTER |
| NEWS 8 | Apr 22 | Federal Research in Progress (FEDRIP) now available |
| NEWS 9 | Jun 03 | New e-mail delivery for search results now available |
| NEWS 10 | Jun 10 | MEDLINE Reload |
| NEWS 11 | Jun 10 | PCTFULL has been reloaded |
| NEWS 12 | Jul 02 | FOREGE no longer contains STANDARDS file segment |
| NEWS 13 | Jul 22 | USAN to be reloaded July 28, 2002; saved answer sets no longer valid |
| NEWS 14 | Jul 29 | Enhanced polymer searching in REGISTRY |
| NEWS 15 | Jul 30 | NETFIRST to be removed from STN |
| NEWS 16 | Aug 08 | CANCERLIT reload |
| NEWS 17 | Aug 08 | PHARMAMarketLetter(PHARMAML) - new on STN |
| NEWS 18 | Aug 08 | NTIS has been reloaded and enhanced |
| NEWS 19 | Aug 19 | Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN |
| NEWS 20 | Aug 19 | IFIPAT, IFICDB, and IFIUDB have been reloaded |
| NEWS 21 | Aug 19 | The MEDLINE file segment of TOXCENTER has been reloaded |
| NEWS 22 | Aug 26 | Sequence searching in REGISTRY enhanced |
| NEWS 23 | Sep 03 | JAPIO has been reloaded and enhanced |
| NEWS 24 | Sep 16 | Experimental properties added to the REGISTRY file |
| NEWS 25 | Sep 16 | CA Section Thesaurus available in CAPLUS and CA |
| NEWS 26 | Oct 01 | CASREACT Enriched with Reactions from 1907 to 1985 |
| NEWS 27 | Oct 21 | EVENTLINE has been reloaded |
| NEWS 28 | Oct 24 | BEILSTEIN adds new search fields |
| NEWS 29 | Oct 24 | Nutraceuticals International (NUTRACEUT) now available on STN |
| NEWS 30 | Oct 25 | MEDLINE SDI run of October 8, 2002 |
| NEWS 31 | Nov 18 | DKILIT has been renamed APOLLIT |
| NEWS 32 | Nov 25 | More calculated properties added to REGISTRY |
| NEWS 33 | Dec 02 | TIBKAT will be removed from STN |
| NEWS 34 | Dec 04 | CSA files on STN |
| NEWS 35 | Dec 17 | PCTFULL now covers WP/PCT Applications from 1978 to date |
| NEWS 36 | Dec 17 | TOXCENTER enhanced with additional content |
| NEWS 37 | Dec 17 | Adis Clinical Trials Insight now available on STN |
| NEWS 38 | Dec 30 | ISMEC no longer available |
| NEWS 39 | Jan 13 | Indexing added to some pre-1967 records in CA/CAPLUS |
| NEWS 40 | Jan 21 | NUTRACEUT offering one free connect hour in February 2003 |
| NEWS 41 | Jan 21 | PHARMAML offering one free connect hour in February 2003 |
| NEWS 42 | Jan 29 | Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC |

| | |
|---|---|
| NEWS EXPRESS | January 6 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002 |
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
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| NEWS LOGIN | Welcome Banner and News Items |

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FILE 'HOME' ENTERED AT 10:18:44 ON 04 FEB 2003

=> file medline embase biosis biotechds scisearch hcaplus ntis lifesci
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.42 0.42

FILE 'MEDLINE' ENTERED AT 10:19:41 ON 04 FEB 2003

FILE 'EMBASE' ENTERED AT 10:19:41 ON 04 FEB 2003
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FILE 'BIOSIS' ENTERED AT 10:19:41 ON 04 FEB 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'BIOTECHDS' ENTERED AT 10:19:41 ON 04 FEB 2003
COPYRIGHT (C) 2003 THOMSON DERWENT AND INSTITUTE FOR SCIENTIFIC INFORMATION

FILE 'SCISEARCH' ENTERED AT 10:19:41 ON 04 FEB 2003
COPYRIGHT (C) 2003 Institute for Scientific Information (ISI) (R)

FILE 'HCAPLUS' ENTERED AT 10:19:41 ON 04 FEB 2003
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FILE 'NTIS' ENTERED AT 10:19:41 ON 04 FEB 2003
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FILE 'LIFESCI' ENTERED AT 10:19:41 ON 04 FEB 2003
COPYRIGHT (C) 2003 Cambridge Scientific Abstracts (CSA)

=> s protease?
L1 372494 PROTEASE?

=> s Nocardiopsis
L2 735 NOCARDIOPSIS

=> s l1 and l2
L3 59 L1 AND L2

=> s feed (a) additive?
L4 10012 FEED (A) ADDITIVE?

L5 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:597756 HCAPLUS

IN Oestergaard, Peter Rahbek; Sjoeholm, Carsten
PA F Hoffmann-La Roche A.-G., Switz.
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A23K001-165
CC 17-12 (Food and Feed Chemistry)
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001058276 | A2 | 20010816 | WO 2001-EP1153 | 20010205 |
| | WO 2001058276 | A3 | 20020221 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: CH, CM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1257176 | A2 | 20021120 | EP 2001-915190 | 20010205 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 2001026797 | A1 | 20011004 | US 2001-779323 | 20010208 |
| | US 2003021774 | A1 | 20030130 | US 2001-779334 | 20010208 |
| PRAI | DK 2000-200 | A | 20000208 | | |
| | US 2000-183133P | P | 20000217 | | |
| | WO 2001-EP1153 | W | 20010205 | | |

AB Disclosed are acid-stable **proteases** homologous to those derived from strains of the genus **Nocardiopsis**, their use in animal feed, **feed-additives** and feed compns. contg. such **proteases**, and methods for the treatment of vegetable proteins using such **proteases**.

ST **protease Nocardiopsis** animal feed vegetable protein

IT Feed
**Nocardiopsis**
(acid-stable **Nocardiopsis proteases** in animal feed)

IT Vegetable
(proteins; treatment with proteinases in manufg. feed)

IT Proteins, general, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(soybean; animal feed manuf. with proteinases and)

IT Proteins, general, biological studies
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(vegetable; treatment with proteinases in manufg. feed)

IT 9001-92-7, **Protease**
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(acid-stable **proteases** in animal feed)

IT 9031-11-2, .beta.-Galactanase 37278-89-0, Xylanase 37341-58-5, Phytase 39346-28-6, Galactanase
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(animal feed contg. proteinases and)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 10:19:41 ON 04 FEB 2003
L1 372494 S PROTEASE?

```
L3           59 S L1 AND L2
L4        10012 S FEED (A) ADDITIVE?
L5            1 S L3 AND L4

=> s acid (a) stable
L6         6127 ACID (A) STABLE

=> s l1 and l6
L7          406 L1 AND L6

=> s vegetable (a) protein?
   7 FILES SEARCHED...
L8         7253 VEGETABLE (A) PROTEIN?

=> s animal (a) feed?
L9        48795 ANIMAL (A) FEED?

=> s l8 or l9
   1 FILES SEARCHED...
L10       55897 L8 OR L9

=> s l7 and l10
L11           4 L7 AND L10

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12           4 DUP REM L11 (0 DUPLICATES REMOVED)

=> d 1-4 ibib ab

L12   ANSWER 1 OF 4  BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
ACCESSION NUMBER: 2001-16039  BIOTECHDS
TITLE:            Use of acid stable protease for
                  producing a food composition;
                     for use as feedstuff, as a food-additive and in
                     vegetable protein treatment
AUTHOR:           Oestergaard P R; Sjoeholm C
PATENT ASSIGNEE:  Roche
LOCATION:         Basle, Switzerland.
PATENT INFO:      WO 2001058276 16 Aug 2001
APPLICATION INFO: WO 2001-EP1153 5 Feb 2001
PRIORITY INFO:    DK 2000-200 8 Feb 2000
DOCUMENT TYPE:    Patent
LANGUAGE:         English
OTHER SOURCE:     WPI: 2001-488930 [53]
AB    The use of at least one stable protease (EC 3.4.21.62) in
      feedstuff where the protease has identity of at least 70% to a
      188 amino acid sequence (I) and or a 17 amino acid sequence (II), is
      claimed.  Also claimed are: improving the nutritional value of feedstuff;
      an animal food-additive; and treatment of vegetable
      proteins.  At least one acid stable
      protease is useful in the preparation of a composition for use in
      feedstuff.  The protease has 71% identity to (I) and/or (II).
      The dosage of the protease is 0.01-200 mg.  The feed
      composition is useful for feeding animals including

L12   ANSWER 2 OF 4  BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
ACCESSION NUMBER: 2001-16038  BIOTECHDS
                  acid stable protease
```

the subtilisin for producing a food composition; for use as feedstuff, as a food-additive and in **vegetable protein** treatment

AUTHOR: Oestergaard P R; Sjoeholm C; Kluenter A
PATENT ASSIGNEE: Roche
LOCATION: Basle, Switzerland.
PATENT INFO: WO 2001058275 16 Aug 2001
APPLICATION INFO: WO 2001-EP1152 5 Feb 2001
PRIORITY INFO: DK 2000-200 8 Feb 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-488929 [53]

AB The use of at least one stable **protease** (EC-3.4.21.62) in feedstuff where the **protease** is of the subtilisin family and/or has less than 10% residual activity when inhibited with subtilisin, is claimed. Also claimed are: improving the nutritional value of feedstuff; an animal food-additive; and treatment of **vegetable proteins**. At least one **acid stable protease** is useful in the preparation of a composition for use in feedstuff. The **protease** is of the subtilisin family and/or 10% residual activity when inhabited with subtilisin. The dosage of the **protease** is 0.01-200 mg/kg of feed. The feed composition is useful for **feeding animals**, including humans. Animals include ruminants and non-ruminants i.e. monogastric animals i.e. pigs, poultry and fish. The feedstuff comprises phytase, endo-1,4-beta-D-xylanase (EC-3.2.1.8), galactanase and/or beta-glucanase (EC-3.2.1.39). Soybean (Glycine max) is included amongst the vegetable source. (63pp)

L12 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:597756 HCAPLUS
DOCUMENT NUMBER: 135:152030
TITLE: Use of **acid-stable proteases** in **animal feed**
INVENTOR(S): Oestergaard, Peter Rahbek; Sjoeholm, Carsten
PATENT ASSIGNEE(S): F Hoffmann-La Roche A.-G., Switz.
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001058276 | A2 | 20010816 | WO 2001 EP1153 | 20010205 |
| WO 2001058276 | A3 | 20020221 | | |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

| | | | | |
|---|---|---|---|---|
| AU [illegible] | A5 | 20010816 | US 2001 [illegible] | 20010208 |
| US 20030217774 | A1 | 20031127 | US 2001 779334 | 20010208 |

PRIORITY APPLN. INFO.: DK 2000-200 A 20000208

AB Disclosed are **acid-stable proteases** homologous to those derived from strains of the genus Nocardiopsis, their use in **animal feed**, feed-additives and feed compns. contg. such **proteases**, and methods for the treatment of **vegetable proteins** using such **proteases**.

L12 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:597755 HCAPLUS
DOCUMENT NUMBER: 135:180103
TITLE: Use of **acid-stable** subtilisin **proteases** in **animal feed**
INVENTOR(S): Oestergaard, Peter Rahbek; Sjoeholm, Carsten; Kluenter, Anna-marie
PATENT ASSIGNEE(S): F Hoffmann-La Roche A.-G., Switz.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001058275 | A2 | 20010816 | WO 2001-EP1152 | 20010205 |
| WO 2001058275 | A3 | 20020221 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1257175 | A2 | 20021120 | EP 2001-907489 | 20010205 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2001026797 | A1 | 20011004 | US 2001-779323 | 20010208 |
| US 2003021774 | A1 | 20030130 | US 2001-779334 | 20010208 |

PRIORITY APPLN. INFO.:
DK 2000-200 A 20000208
US 2000-183133P P 20000217
WO 2001-EP1152 W 20010205

AB Disclosed are **acid-stable proteases** of the subtilisin family, their use in **animal feed**, feed-additives and feed compns. contg. such **proteases**, and methods for the treatment of **vegetable proteins** using such **proteases**.

=> d his

(FILE 'HOME' ENTERED AT 10:18:44 ON 04 FEB 2003)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
[illegible] ENTERED AT [illegible] ON 04 FEB 2003

[illegible] L3 AND L4
L6 [illegible] S ACID (A) STABLE
L7 406 S L1 AND L6
[illegible]

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L10        55897 S L8 OR L9
L11            4 S L7 AND L10
L12            4 DUP REM L11 (0 DUPLICATES REMOVED)

=> e sjoeholm c/au
E1            10      SJOEHOLM B/AU
E2             1      SJOEHOLM BIRGITTA/AU
E3            10 --> SJOEHOLM C/AU
E4            13      SJOEHOLM CARSTEN/AU
E5             1      SJOEHOLM ELISABETH/AU
E6             1      SJOEHOLM ELISABETH A/AU
E7             1      SJOEHOLM EVA/AU
E8             1      SJOEHOLM G/AU
E9             1      SJOEHOLM GOERAN HENRY/AU
E10            1      SJOEHOLM GOESTA/AU
E11           10      SJOEHOLM H/AU
E12            6      SJOEHOLM HANS/AU

=> s e3-e4
L13           23 ("SJOEHOLM C"/AU OR "SJOEHOLM CARSTEN"/AU)

=> s oestergaard P R/au
L14            5 OESTERGAARD P R/AU

=> e oestergaard P R/au
E1             4      OESTERGAARD P AA/AU
E2            15      OESTERGAARD P B/AU
E3             5 --> OESTERGAARD P R/AU
E4            12      OESTERGAARD PER/AU
E5            10      OESTERGAARD PER B/AU
E6             1      OESTERGAARD PER BJOERN/AU
E7             6      OESTERGAARD PETER RAHBEK/AU
E8             1      OESTERGAARD PREHEN/AU
E9             7      OESTERGAARD S/AU
E10            2      OESTERGAARD SOEREN/AU
E11            1      OESTERGAARD STEEN/AU
E12            4      OESTERGAARD T/AU

=> s e3-e7
L15           34 ("OESTERGAARD P R"/AU OR "OESTERGAARD PER"/AU OR "OESTERGAARD
                 PER B"/AU OR "OESTERGAARD PER BJOERN"/AU OR "OESTERGAARD PETER
                 RAHBEK"/AU)

=> s l13 or l15
L16           51 L13 OR L15

=> s l1 and l16
L17            6 L1 AND L16

=> dup rem l17
PROCESSING COMPLETED FOR L17
L18            6 DUP REM L17 (0 DUPLICATES REMOVED)

=> d 1-6 ibib ab
```

for use as feedstuff [illegible] protein treatment

AUTHOR: **Oestergaard P R; Sjoeholm C**

PATENT INFO: WO 2001058276 16 Aug 2001
APPLICATION INFO: WO 2001-EP1153 5 Feb 2001
PRIORITY INFO: DK 2000-200 8 Feb 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-488930 [53]
AB The use of at least one stable **protease** (EC-3.4.21.62) in feedstuff where the **protease** has identity of at least 70% to a 188 amino acid sequence (I) and or a 17 amino acid sequence (II), is claimed. Also claimed are: improving the nutritional value of feedstuff; an animal food-additive; and treatment of vegetable proteins. At least one acid stable **protease** is useful in the preparation of a composition for use in feedstuff. The **protease** has 71% identity to (I) and/or (II). The dosage of the **protease** is 0.01-200 mg. The feed composition is useful for feeding animals, including humans. Animals include ruminants and non-ruminants i.e. monogastric animals i.e. pigs, poultry and fish. The feedstuff comprises phytase, endo-1,4-beta-D-xylanase (EC-3.2.1.8), galactanase and/or beta-glucanase (EC-3.2.1.39). Soybean (Glycine max) is included amongst the vegetable source. (49pp)

L18 ANSWER 2 OF 6 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
ACCESSION NUMBER: 2001-16038 BIOTECHDS
TITLE: Use of acid stable **protease** of the subtilisin for producing a food composition;
for use as feedstuff, as a food-additive and in vegetable protein treatment
AUTHOR: **Oestergaard P R**; **Sjoeholm C**; Kluenter A
PATENT ASSIGNEE: Roche
LOCATION: Basle, Switzerland.
PATENT INFO: WO 2001058275 16 Aug 2001
APPLICATION INFO: WO 2001-EP1152 5 Feb 2001
PRIORITY INFO: DK 2000-200 8 Feb 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-488929 [53]
AB The use of at least one stable **protease** (EC-3.4.21.62) in feedstuff where the **protease** is of the subtilisin family and/or has less than 10% residual activity when inhibited with subtilisin, is claimed. Also claimed are: improving the nutritional value of feedstuff; an animal food-additive; and treatment of vegetable proteins. At least one acid stable **protease** is useful in the preparation of a composition for use in feedstuff. The **protease** is of the subtilisin family and/or 10% residual activity when inhabited with subtilisin. The dosage of the **protease** is 0.01-200 mg/kg of feed. The feed composition is useful for feeding animals, including humans. Animals include ruminants and non-ruminants i.e. monogastric animals i.e. pigs, poultry and fish. The feedstuff comprises phytase, endo-1,4-beta-D-xylanase (EC-3.2.1.8), galactanase and/or beta-glucanase (EC-3.2.1.39). Soybean (Glycine max) is included amongst the vegetable source. (63pp)

L18 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:597756 HCAPLUS
DOCUMENT NUMBER: 135:152030

PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001058276 | A2 | 20010816 | WO 2001-EP1153 | 20010205 |
| WO 2001058276 | A3 | 20020221 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1257176 | A2 | 20021120 | EP 2001-915190 | 20010205 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2001026797 | A1 | 20011004 | US 2001-779323 | 20010208 |
| US 2003021774 | A1 | 20030130 | US 2001-779334 | 20010208 |

| PRIORITY APPLN. INFO.: | | |
|---|---|---|
| DK 2000-200 | A | 20000208 |
| US 2000-183133P | P | 20000217 |
| WO 2001-EP1153 | W | 20010205 |

AB Disclosed are acid-stable **proteases** homologous to those derived from strains of the genus Nocardiopsis, their use in animal feed, feed-additives and feed compns. contg. such **proteases**, and methods for the treatment of vegetable proteins using such **proteases**.

L18 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2003 ACS

| | |
|---|---|
| ACCESSION NUMBER: | 2001:597755 HCAPLUS |
| DOCUMENT NUMBER: | 135:180103 |
| TITLE: | Use of acid-stable subtilisin **proteases** in animal feed |
| INVENTOR(S): | **Oestergaard, Peter Rahbek**; **Sjoeholm, Carsten**; Kluenter, Anna-marie |
| PATENT ASSIGNEE(S): | F Hoffmann-La Roche A.-G., Switz. |
| SOURCE: | PCT Int. Appl., 63 pp.<br>CODEN: PIXXD2 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | English |
| FAMILY ACC. NUM. COUNT: | 2 |

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001058275 | A2 | 20010816 | WO 2001-EP1152 | 20010205 |
| WO 2001058275 | A3 | 20020221 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1257176 | A2 | 20021120 | EP 2001-915190 | 20010205 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| US 2001026797 | A1 | 20011004 | US 2001-779323 | 20010208 |
| US 2003021774 | A1 | 20030130 | US 2001-779334 | 20010208 |

| PRIORITY APPLN. INFO.: | | |
|---|---|---|
| DK 2000-200 | A | 20000208 |
| US 2000-183133P | P | 20000217 |
| WO 2001-EP1153 | W | 20010205 |

AB Disclosed are acid-stable **proteases** homologous to those derived from strains of the genus Nocardiopsis, their use in animal feed, feed-additives and feed compns. contg. such **proteases**, and methods for the treatment of vegetable proteins using such **proteases**.

WO 2001-EP1152 W 20010205

AB Disclosed are acid-stable **proteases** of the subtilisin family, their use in animal feed, feed-additives and feed compns. contg. such **proteases**, and methods for the treatment of vegetable proteins using such **proteases**.

L18 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:192181 HCAPLUS
DOCUMENT NUMBER: 126:183173
TITLE: Proteolytic enzymes derived from Amycolata and Amycolatopsis and their use in cheese-making and detergents
INVENTOR(S): **Sjoeholm, Carsten**; Nielsen, Bjarne Roenfeldt; Dambmann, Claus
PATENT ASSIGNEE(S): Novo Nordisk A/s, Den.; Sjoeholm, Carsten; Nielsen, Bjarne Roenfeldt; Dambmann, Claus
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9704082 | A1 | 19970206 | WO 1996-DK299 | 19960702 |
| W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG | | | | |
| RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA | | | | |
| AU 9665128 | A1 | 19970218 | AU 1996-65128 | 19960702 |
| EP 839187 | A1 | 19980506 | EP 1996-924787 | 19960702 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI | | | | |
| CN 1193996 | A | 19980923 | CN 1996-196439 | 19960702 |
| US 5948746 | A | 19990907 | US 1998-7269 | 19980114 |
| PRIORITY APPLN. INFO.: | | | DK 1995-844 | 19950719 |
| | | | WO 1996-DK299 | 19960702 |

AB The present invention relates to novel proteolytic enzymes. More specifically, the present invention relates to proteolytic enzymes obtainable from strains of Amycolata and Amycolatopsis. Moreover the invention relates to a process for the prepn. of the proteolytic enzyme of the invention, as well as detergent additives and detergent compns. comprising the proteolytic enzyme. The **protease** purified from Amycolatopsis mediterranei had a mol. wt. of 33 kilodaltons and a pI of 9.1. The enzyme displayed >90% activity at pH 8-11 and had a temp. optimum between 30-45.degree. when detd. on casein substrate. Using glucagon as a substrate, the **protease** showed a preference for cleaving Arg-Arg and Trp-Leu bonds, with weaker activity at Lys-Tyr bonds. Detergent formulations contg. the **protease** are presented.

L18 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:446691 HCAPLUS
DOCUMENT NUMBER: 115:46691

Kutzke; Petersen, Lars C.; **Oestergaard, Per B.**; Fisiel, Walter
CORPORATE SOURCE: Biopharm. Div., Novo-Nord., Bagsvaerd, Den

DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effects of zinc ions on the amidolytic and proteolytic activity of recombinant factor VIIa in the presence of physiol. levels of calcium ions were examd. The amidolytic activity of factor VIIa was inhibited half-maximally by 20 .mu.M zinc. The amidolytic activity of a complex of recombinant tissue factor and factor VIIa was inhibited half-maximally by 70 .mu.M zinc. In contrast to the results obtained with factor VIIa, the amidolytic activities of other human vitamin K-dependent coagulation **proteases** including factor Xa, thrombin, and activated protein C were not appreciably affected by 50-100 .mu.M zinc. The proteolytic activation of factor X by a complex of factor VIIa and relipidated tissue factor apoprotein was inhibited half-maximally by 40 .mu.M zinc, whereas activation of factor IX in this system was inhibited half-maximally by 70 .mu.M zinc ions. Considerably higher levels of zinc (.apprx.100 .mu.M) were required to inhibit half-maximally the rate of factor X activation by a complex of factor VIIa and functional tissue factor on the surface of either a human bladder carcinoma cell line, J72, or stimulated human umbilical vein endothelial cells. Activation of factor IX by factor VIIa and tissue factor on the surface of J82 cells was not influenced by zinc. However, the activation rate of factor IX on human umbilical vein endothelial cells was inhibited half-maximally at 100 .mu.M zinc. The activation of factor X by factor VIIa in the presence of small umilamellar phospholipid vesicles was inhibited half-maximally by 20 .mu.M zinc, whereas factor IX activation by factor VIIa was not appreciably influenced by a 10-100 .mu.M zinc. Thus, plasma levels of zinc ions inhibit the amidolytic and proteolytic activities of factor VIIa. The mechanism of this inhibition, as well as its possible physiol. relevance, is unknown.

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(FILE 'HOME' ENTERED AT 10:18:44 ON 04 FEB 2003)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS, LIFESCI' ENTERED AT 10:19:41 ON 04 FEB 2003

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L1       372494 S PROTEASE?
L2          735 S NOCARDIOPSIS
L3           59 S L1 AND L2
L4        10012 S FEED (A) ADDITIVE?
L5            1 S L3 AND L4
L6         6127 S ACID (A) STABLE
L7          406 S L1 AND L6
L8         7253 S VEGETABLE (A) PROTEIN?
L9        48795 S ANIMAL (A) FEED?
L10       55897 S L8 OR L9
L11           4 S L7 AND L10
L12           4 DUP REM L11 (0 DUPLICATES REMOVED)
                E SJOEHOLM C/AU
L13          23 S E3-E4
L14           5 S OESTERGAARD P R/AU
                E OESTERGAARD P R/AU
L15          34 S E3-E7
L16          51 S L13 OR L15
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| | Issue Date | Pages | Document ID |
|---|---|---|---|
| 1 | 20011004 | 18 | US 20010026797 A1 |
| 2 | 19990907 | 28 | US 5948672 A |
| 3 | 19980922 | 6 | US 5811382 A |
| 4 | 19940517 | 13 | US 5312748 A |
| 5 | 19900522 | 22 | US 4927558 A |

| | Issue Date | Pages | Document ID | Title |
|---|---|---|---|---|
| 1 | 20020801 | 38 | US 20020102702 A1 | Protease variants and compositions |
| 2 | 20011004 | 18 | US 20010026797 A1 | Use of acid-stable proteases in animal feed |
| 3 | 20010911 | 20 | US 6287585 B1 | Methods for laundry using polycations and enzymes |
| 4 | 20010710 | 13 | US 6258129 B1 | Method for enzymatic treatment of wool |
| 5 | 20010614 | 14 | US 20010003220 A1 | METHOD FOR ENZYMATIC TREATMENT OF WOOL |
| 6 | 20001031 | 7 | US 6140109 A | Method for enzymatic treatment of wool |
| 7 | 20000808 | 10 | US 6100080 A | Method for enzymatic treatment of biofilm |
| 8 | 20000808 | 10 | US 6099588 A | Method for treatment of wool |
| 9 | 20000418 | 8 | US 6051033 A | Method for enzymatic treatment of wool |

| | ~~Issue Date~~ | Pages | Document ID | Title |
|---|---|---|---|---|
| 11 | 19980922 | 6 | US 5811382 A | Detergent compositions |
| 12 | 19940517 | 13 | US 5312748 A | Protease |

| | U | 1 | ~~Issue Date~~ | Pages | Document ID |
|---|---|---|---|---|---|
| 1 | ☒ | ☐ | 20011004 | 18 | US 20010026797 A1 |

| | Title | Current OR | Current XRef |
|---|---|---|---|
| 1 | Use of acid-stable proteases in animal feed | 424/94.6 | 426/54 |

| | Retrieval Classif | Inventor | S | C | P | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Sjoeholm, Carsten et al. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | Image Doc. Displayed | PT |
|---|---|---|
| 1 | US 20010026797 | ☐ |

| | U | 1 | ~~Issue Date~~ | Pages | Document ID |
|---|---|---|---|---|---|
| 1 | ☐ | ☐ | 20030130 | 26 | US 20030021774 A1 |
| 2 | ☐ | ☐ | 20011004 | 18 | US 20010026797 A1 |

| | Title | Current OR | Current XRef |
|---|---|---|---|
| 1 | Use of acid-stable subtilisin proteases in animal feed | 424/94.3 | 424/442; 424/94.63; 424/94.66 |
| 2 | Use of acid-stable proteases in animal feed | 424/94.6 | 426/54 |

| | Retrieval Classif | Inventor | S | C | P | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Sjoeholm, Carsten et al. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | | Sjoeholm, Carsten et al. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | Image Doc. Displayed | PT |
|---|---|---|
| 1 | US 20030021774 | ☐ |
| 2 | US 20010026797 | ☐ |

| | U | 1 | Issue Date | Pages | Document ID |
|---|---|---|---|---|---|
| 1 | ☐ | ☐ | 20030130 | 26 | US 20030021774 A1 |
| 2 | ☐ | ☐ | 20011004 | 18 | US 20010026797 A1 |
| 3 | ☐ | ☐ | 19960924 | 6 | US 5558640 A |

| | Title | Current OR | Current XRef |
|---|---|---|---|
| 1 | Use of acid-stable subtilisin proteases in animal feed | 424/94.3 | 424/442; 424/94.63; 424/94.66 |
| 2 | Use of acid-stable proteases in animal feed | 424/94.6 | 426/54 |
| 3 | System for infusion of medicine into the body of a patient | 604/67 | 604/891.1; 607/32 |

| | Retrieval Classif | Inventor | S | C | P | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Sjoeholm, Carsten et al. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | | Sjoeholm, Carsten et al. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3 | | Pfeiler, Manfred et al. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | Image Doc. Displayed | PT |
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| 1 | US 20030021774 | ☐ |
| 2 | US 20010026797 | ☐ |
| 3 | US 5558640 | ☐ |